



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,363	08/10/2005	Gabriella H Kabay	Q85546	2980
23373 7590 04/23/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER ERDEM, FAZLI	
			ART UNIT	PAPER NUMBER
			2826	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/23/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

sf

Office Action Summary	Application No.	Applicant(s)	
	10/519,363	KABAY ET AL.	
	Examiner	Art Unit	
	Fazli Erdem	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed on 4/10/2007 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Tanabe et al. (6,835,112) in view of Fujii et al. (JP 03192689).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7-12, 14, 15 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (6,835,112) in view of Fujii et al. (JP 03192689)

Regarding Claim 7, Tanabe et al. disclose an electroluminescent lamp and method for manufacturing the same where in Figs 1 and 3A-3D it is disclosed a method of forming electroluminescent device including placing an insulating layer 4 on an electrode layer 2, placing light emitting layer 3 (3A and 3B) having phosphor particles and a binder matrix onto the insulating layer 4, placing transparent electrode 5 onto the light emitting layer. Tanabe et al. fail to disclose the protrusion of phosphor particles from the upper and lower surfaces of the light emitting layer. However, Fujii et al. disclose an organic

dispersion type EL luminescent body where in Fig. 2, phosphorus particles in light emitting layer 3 protrude in upper and lower surfaces to the transparent electrode layer 4 and insulating layer 2, respectively.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to have the phosphor particles in light emitting layer protrude from the upper and lower surfaces of the light emitting layer in Tanabe et al. as taught by Fujii et al. in order to have a better adhesion/conformity between the light emitting layer that is sandwiched by electrode and insulating layer since the protrusion of the phosphor particles increases the surface area between the light emitting layer and electrode/insulating layers.

Regarding Claim 8, in Tanabe et al., in column 6, lines 1-10, the required softening of the insulating layer is disclosed.

Regarding Claim 9, in Tanabe et al, in column 6, lines 40-65, the required heating of the insulating layer is disclosed.

Regarding Claim 10, insulating layer 4 in Tanabe et al. is a dielectric layer.

Regarding Claim 11, in Tanabe et al. dielectric layer 4 comprises barium titanate.

Regarding Claim 12, in Tanabe et al., in column 6, lines 1-10, the required solvent is disclosed.

Regarding Claim 14, Tanabe et al. disclose an electroluminescent lamp and method for manufacturing the same where in Figs 1 and 3A-3D it is disclosed a method of forming electroluminescent device including placing an insulating layer 4 on an electrode layer 2, placing light emitting layer 3 (3A and 3B) having phosphor particles and a binder matrix where the proportion of phosphor particles in the binder matrix being sufficient that when solidified a proportion of phosphor particles causes protrusions in a top surface onto the insulating layer 4, placing transparent electrode 5 onto the light emitting layer. Tanabe et al. fail to disclose the protrusion of phosphor particles from the upper and lower surfaces of the light emitting layer. However, Fujii et al. disclose an organic dispersion type EL luminescent body where in Fig. 2, phosphorus particles in light emitting layer 3 protrude in upper and lower surfaces to the transparent electrode layer 4 and insulating layer 2, respectively,

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to have the phosphor particles in light emitting layer protrude from the upper and lower surfaces of the light emitting layer in Tanabe et al. as taught by Fujii et al. in order to have a better adhesion/conformity between the light emitting layer that is sandwiched by electrode and insulating layer since the protrusion of the phosphor particles increases the surface area between the light emitting layer and electrode/insulating layers.

Regarding Claim 15, phosphor particles of Fujii et al. protrude from both surfaces of light emitting layer as shown in Fig 2.

Regarding Claim 17, Tanabe et al. disclose an electroluminescent lamp and method for manufacturing the same where in Figs 1 and 3A-3D it is disclosed a method of forming electroluminescent device including placing an insulating layer 4 on an electrode layer 2, placing light emitting layer 3 (3A and 3B) having phosphor particles and a binder matrix where the proportion of phosphor particles in the binder matrix being sufficient that when solidified a proportion of phosphor particles causes protrusions in a top surface onto the insulating layer 4, placing transparent electrode 5 onto the light emitting layer. Furthermore, in column 6 lines 40-65, the heating of the insulating layer is disclosed. Tanabe et al. fail to disclose the protrusion of phosphor particles from the upper and lower surfaces of the light emitting layer. However, Fujii et al. disclose an organic dispersion type EL luminescent body where in Fig. 2, phosphorus particles in light emitting layer 3 protrude in upper and lower surfaces to the transparent electrode layer 4 and insulating layer 2, respectively,

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to have the phosphor particles in light emitting layer protrude from the upper and lower surfaces of the light emitting layer in Tanabe et al. as taught by Fujii et al. in order to have a better adhesion/conformity between the light emitting layer that is sandwiched by electrode and insulating layer since the protrusion of the phosphor particles increases the surface area between the light emitting layer and electrode/insulating layers.

4. Claims 13 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (6,835,112) in view of Fujii et al. (JP 03192689) further in view of Coghlan et al. (2002/0190636)

Regarding Claims 13 and 16 Tanabe et al. disclose an electroluminescent lamp and method for manufacturing the same where in Figs 1, and 3A-3D it is disclosed a method of forming electroluminescent device including placing an insulating layer 4 on an electrode layer 2, placing light emitting layer 3 (3A and 3B) having phosphor particles and a binder matrix onto the insulating layer 4, placing transparent electrode 5 onto the light emitting layer. Fujii et al. disclose an organic dispersion type EL luminescent body where in Fig. 2, phosphorus particles in light emitting layer 3 protrude in upper and lower surfaces to the transparent electrode layer 4 and insulating layer 2, respectively. Tanabe et al. and Fujii et al. combination fail to disclose a phosphorus to binder ratio of $3/4^{\text{th}}$ (75%) or higher. However, Coghlan et al. disclose an EL lamp with improved brightness where in claims 1-4, the required phosphorus to binder ratio is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required phosphorus to binder ratio in Tanabe et al. and Fujii et al. combination in order to have a electroluminescent device with increased brightness.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (571) 272-1914. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached on (571) 272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FE
April 18, 2007


SUE A. PURVIS
SUPERVISORY PATENT EXAMINER